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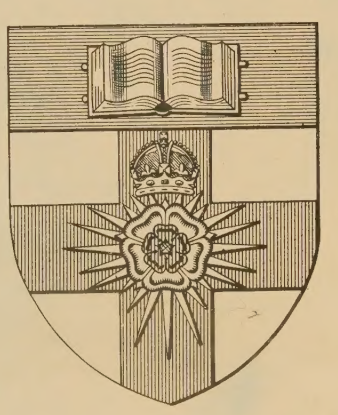

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OF

SCIENTIFIC PAPERS

1800—1900

SUBJECT INDEX

VOLUME II

MECHANICS

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MECHANICS

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1909

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ARRANGED FOR A COMMITTEE OF THE ROYAL SOCIETY
UNDER THE SUPERINTENDENCE OF

HERBERT McLEOD, LL.D., F.R.S.

DIRECTOR OF THE CATALOGUE

with the assistance of

R. J. DALLAS, M.A.

KING'S COLLEGE, CAMBRIDGE

PREFACE

IN the Preface to the volume forming the Subject Index to the papers on Pure Mathematics for the nineteenth century, published in 1908, an outline of the history of the Royal Society's Catalogue of Scientific Papers is given; it is not necessary to repeat that account.

The present volume deals with the papers on Mechanics as classified in the Schedules of the International Catalogue of Scientific Literature; it contains 21295 entries referring to the papers contained in 959 serial publications.

The Index titles for papers published in the latter part of the century, from 1884 to 1900 inclusive, have been made by Referees familiar with the subjects, who have consulted the original papers and have made the titles from the contents of the papers and not merely from their headings. It was intended that the Index entries for the papers from 1800 to 1883 should be made from the complete titles as printed in the Catalogue of Authors already published; but it was soon found that many of these titles were too indefinite for such minute classification, and reference has had to be made to the original papers in a large number of cases.

The subjects are arranged under the registration numbers adopted in the International Catalogue of Scientific Literature; a copy of Schedule B (Mechanics) of that Catalogue, is prefixed to the Index, with indication of the pages on which the titles for the different sections occur. It has occasionally been found convenient, in order to save repetition in printing, to group entries under a sub-heading which is not contained in the International Catalogue Schedule. Where this has been done the sub-heading is printed in italics. In some of these cases the words of the sub-heading are understood to exist before the entries following them, and consequently these entries commence with small letters. These minor classifications, being often made mechanically on the basis of the explicit mention of the sub-heading, are not to be taken as exhaustive; cognate entries may be found elsewhere under the same main heading. The unit of classification is thus the complete numbered heading.

Preface

The entries in the Index are arranged so that reference can be made, if necessary, to the complete titles in the Catalogue of Scientific Papers. Generally the author's name together with the date will indicate the volume in which the title of the paper may be found in full. But these clues are insufficient when the paper is anonymous, or occurs in Volume XII or in the additions to Volume VI. They are also at fault for titles marked with an asterisk showing that they belong to previous volumes; in these cases the number of the volume is given in the Index entry in small Roman numerals within brackets. The references have been made as short as possible: thus the number of only the initial page of each paper has been given; but the length of the paper may be found by reference to the Catalogue of Authors.

When an error has been found in an author's name in the Catalogue, it is corrected in the Index and a reference made to the error.

The Index contains references to some papers, of dates earlier than 1884, which were omitted in previous volumes of the Catalogue: these are indicated by an asterisk placed before the date; the full titles of these papers will be given in the continuation of the Catalogue of Authors.

When an author's personal name does not appear in the original heading of a paper, no attempt has been made to find the name for the Index; but this will be done for the Catalogue of Authors.

Entries on the same subject are arranged, so far as possible, in order of date irrespective of the authors' names, with the endeavour to present the subject in the historical form. This grouping of the entries, involving modifications of titles prepared by different Referees, or by the same Referee at different times, has been one of the most difficult problems in the preparation of the Index.

The abbreviations used in the Royal Society Catalogue for the names of the serials have been further shortened for the Index. As the abbreviations are not uniform in all the volumes, it will be found that the same journal may be indicated by several different abbreviations, but in each case the one selected is that which was used in the volume in which the title of the paper occurs.

In the case of serials commencing since 1883, the abbreviations adopted in the International Catalogue have been used as a guide.

The list of serials will, as in the case of Pure Mathematics, be a valuable feature of the Index. It has been drawn up by the Director, and contains the names of 959 serials from which the entries in the Index have been taken. Each title is preceded by the abbreviation which represents the serial in the Index; the date of commencement of the serial is given, and if it is extinct the date of the last volume is added. There are appended symbols representing the names of twenty-eight British Libraries in some of which the serials may be found; where the set is incomplete the symbol is followed by *i*. The information from which this list has been compiled was obtained, in the first instance, from published catalogues; subsequently the list was submitted to the custodians of many of the libraries, who kindly marked many serials which had not been found in the catalogues used. The thanks of the Committee for this valuable assistance are due to Mr F. Jenkinson of the Cambridge University Library, Mr E. W. B. Nicholson of the Bodleian Library, the Librarian of the Radcliffe Library, the Librarian of the Cambridge Philosophical Society, Mr F. W. Clifford of the Chemical Society, to Mr R. Lloyd Praeger for obtaining information from the five libraries in Dublin, Mr J. Hardy of the Royal Society of Edinburgh, Mr C. V. Crook of the Geological Museum, Mr Rupert Jones of the Geological Society, Mr J. Knight of the Royal Philosophical Society, Glasgow, Mr J. L. Galbraith of the University, Glasgow, Dr J. H. T. Tudsbery of the Institution of Civil Engineers, Dr B. Daydon Jackson and Mr A. W. Kappel of the Linnean Society, the Librarian of the London Mathematical Society, Mr J. W. Knapman of the Pharmaceutical Society, Mr E. W. Hulme of the Patent Office Library, Mr W. H. Wesley of the Royal Astronomical Society, Mr F. Allen of the Royal Geographical Society, Mr R. W. Chambers of University College, London, and Mr L. W. Fulcher of the Science Library, Science Museum, South Kensington.

Although much care has been expended in making this list as accurate as possible, it is probable that some errors will still be found, and the Director will be thankful to any one who will send corrections: portions of the list will be required for the subsequent volumes of the Index.

The following Referees have assisted at various times in the preparation of the Subject Index in Mechanics: Miss Alice Everett, Miss W. M. Hudson, Miss E. Perrin, Mr R. J. Dallas, Mr A. T. Goodfellow, Mr R. Hargreaves, Mr H. Knapman, Dr R. A. Lehfeldt, Dr Max von May, Dr W. Marshall Watts,

and Mr G. Harold Wilson. The Committee is indebted to them for much valuable help.

The arrangement of the contents of this volume for the press has been made by Mr R. J. Dallas, M.A., of King's College, Cambridge. To him, and to Miss Bremner and the other members of the Catalogue Staff of the Royal Society, thanks are due for careful and conscientious work. Mr G. B. Mathews, F.R.S., a member of the Committee in charge of the Catalogue, and the officers of the Royal Society, have given help from time to time about questions of arrangement.

The material for the Index volume for Physics is already in an advanced state of preparation; this is largely owing to the interest which Dr Ludwig Mond, F.R.S., has continued to take in the work, and the increased subsidy by which he has most generously made acceleration possible.

The Catalogue of Scientific Papers arranged under Authors, for the period 1884 to 1900, is in preparation; the material will not however be quite complete until the Subject Indexes for the various Sciences have been reduced to order.

The Syndics of the Cambridge University Press have undertaken the complete risk of printing and publishing, as regards both the Catalogue of Scientific Papers and the Subject Index. It will be the care of the Committee, and it is hoped of the Scientific world generally, to use their best endeavours that this public-spirited action shall not result in financial loss.

The thanks of the Committee are due to the officials of the Cambridge Press for their unfailing courtesy in the discharge of a complex task.

November, 1909.

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LIST OF SERIAL PUBLICATIONS

WITH THE ABBREVIATIONS OF THEIR TITLES USED IN THE INDEX, AND LIBRARIES WHERE THE SERIALS CAN BE CONSULTED.

The date following the title of a serial indicates the year of its commencement; if a second date is given it marks the termination of the serial.

The letters following the dates indicate libraries where the serials are to be found: if the serial is incomplete, the symbol of the library is followed by *i*.

B.M.	British Museum.	Glasg.U.	Glasgow University.
Camb.P.S.	Cambridge Philosophical Library.	I.CE.	Institution of Civil Engineers, London.
Camb.U.	Cambridge University Library.		
Chem.S.	Chemical Society.	Linn.S.	Linnean Society.
Dub.N.L.I.	National Library of Ireland, Dublin.	Math.S.	Mathematical Society.
Dub.R.C.S.	Royal College of Science, Dublin.	N.H.M.	Natural History Museum.
Dub.R.D.S.	Royal Dublin Society.	Oxon.B.	Bodleian, Oxford.
Dub.R.I.A.	Royal Irish Academy, Dublin.	Oxon.B.(R.)	Deposited in Radcliffe.
Dub.T.C.	Trinity College, Dublin.	Oxon.R.	Radcliffe, Oxford.
Edinb.R.S.	Royal Society of Edinburgh.	Pharm.S.	Pharmaceutical Society, London.
Edinb.U.	Edinburgh University. (*Information incomplete.*)	P.O.	Patent Office, London.
		R.A.S.	Royal Astronomical Society.
Geol.M.	Geological Survey Museum, Jermyn St.	R.Geogr.S.	Royal Geographical Society.
		R.S.	Royal Society.
Geol.S.	Geological Society.	S.K.	Science Museum Library, South Kensington.
Glasg.P.S.	Royal Philosophical Society of Glasgow.	U.C.L.	University College, London.

A. Agn. ..... Annales Agronomiques....Paris.
1851; 1875— B.M.; Chem.S.*i.*; Linn.S.; Oxon.B.; P.O.*i.*; R.S.*i.*

Aarau Arch. Md. ..... Archiv der Medizin, Chirurgie, und Pharmacie. Aarau.
1816—17. R.S.

Aarau Mt. ..... Mittheilungen der Aargauischen Naturforschenden Gesellschaft. Aarau.
1878— N.H.M.; R.S.; S.K.

A. C. ..... Annales de Chimie, ou Recueil de Mémoires concernant la Chimie et les Arts qui en dépendent. Paris.
1789— B.M.; Camb.U.; Chem.S.; Dub.R.D.S.*i.*; Dub.T.C.*i.*; Edinb.R.S.; Edinb.U.; Glasg.U.; I.CE.; N.H.M.; Oxon.B.*i.*(R.); Pharm.S.; P.O.; R.S.; S.K.; U.C.L.

A. C. Anal. ..... Annales de Chimie Analytique appliquée à l'Industrie, à l'Agriculture, à la Pharmacie et à la Biologie. Paris.
1896— Chem.S.*i.*; P.O.

Ac. Cæs. Leop. N. Acta ... Nova Acta physico-medica Academiæ Cæs. Leopoldino-Carolinæ Naturæ Curiosorum. Erlangen, Bonn, Breslau.
1758— Camb.P.S.; Camb.U.; Chem.S.*i.*; Dub.T.C.; Edinb.R.S.*i.*; Edinb.U.; Geol.S.*i.*; Glasg.U.; Linn.S.*i.*; N.H.M.; Oxon.R.; Pharm.S.*i.*; R.A.S.*i.*; R.S.; S.K.*i.*; U.C.L.*i.*
See **Ac. Nt. C. N. Acta** *and* **Cæs. Leop. Ac. N. Acta.**

Acireale Ac. At. ..... Atti e Rendiconti dell' Accademia di Scienze, Lettere e Arti dei Zelanti e PP. dello Studio di Acireale. Acireale.
1890— Camb.P.S.*i.*; Geol.S.*i.*; N.H.M.*i.*; R.S.*i.*

Ac. Nt. C. N. Acta ..... *See* **Ac. Cæs. Leop. N. Acta** *and* **Cæs. Leop. Ac. N. Acta.**

A. Cond. Pon. Chauss. ... Annales des Conducteurs des Ponts et Chaussées; recueil de mémoires, etc., concernant le Service de Conducteurs des Ponts et Chaussées. Paris.
1857— I.CE.*i.*; P.O.

A. Cons. Arts et Mét. ... Annales du Conservatoire des Arts et Métiers. Paris.
1861— B.M.; Camb.U.; Glasg.P.S.*i.*; I.CE.*i.*; Oxon.B.; P.O.; R.S.; S.K.*i.*
See **Par. A. Cons.**

A. C. Phm. ... . Annalen der Chemie und Pharmacie. Lemgo, Leipzig, Heidelberg.
1832— B.M.; Camb.U.; Chem.S.; Dub.N.L.I.*i.*; Dub.R.C.S.*i.*; Edinb.R.S.*i.*; Glasg.P.S.; Glasg.U.*i.*; N.H.M.; Oxon.R.; Pharm.S.*i.*; P.O.; R.S.; S.K.; U.C.L.*i.*
See **Lieb. A.**

Acta Mth...... Acta Mathematica. Stockholm.
1882— B.M.; Camb.P.S.; Camb.U.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.U.; Math.S.; Oxon.R.; R.A.S.; R.S.; U.C.L.

Act. S. Helv. ..... Actes de la Société Helvétique des Sciences Naturelles. Lausanne, etc.
1825— B.M.*i.*; Edinb.R.S.*i.*; Linn.S.*i.*; N.H.M.; S.K.
See **At. S. Elvet., Sch. Gs. Vh.** *and* **Sch. Nf. Gs. Vh.**

A. das Sc...... Annaes das Sciencias, etc. por huma Sociedade de Portuguezes residentes em Paris. Paris.
1818—27. B.M.; Camb.U.*i.*
See **Par. A. das Sc.**

Adelaide Ph. S. T...... Adelaide Philosophical Society. Annual Reports and Transactions. Adelaide.
1865—79. B.M.*i.*; Edinb.R.S.*i.*; I.CE.*i.*; Linn.S.; N.H.M.*i.*; R.A.S.*i.*; R.S.*i.*

A. der Hydrog. .... Annalen der Hydrographie und Maritimen Meteorologie. Herausgegeben von der Deutschen Seewarte in Hamburg. Berlin.
1875— *Continuation of:* Hydrographische Mittheilungen, 1873—74. B.M.; P.O.*i.*; R.Geogr.S.

A. di C. ..... Annali di Chimica. Milano.
1845—97. *Continued as:* Annali di Farmacoterapia e Chimica, 1898— B.M.; Camb.U.*i.*; Chem.S.*i.*; P.O.*i.*

A. d'Ocul...... Annales d'Oculistique. Charleroi, Bruxelles, Paris.
1838— B.M.; Camb.U.*i.*; Oxon.R.*i.*

Aér. ..... L'Aéronaute. Bulletin Mensuel Illustré de la Navigation Aérienne. Paris.
1868— B.M.*i.*; P.O.; S.K.

Aer. J. ..... The Aeronautical Journal. London.
1897— B.M.; Camb.U.*i.*; I.CE.*i.*; P.O.; R.S.; S.K.

Aër. S. Rp. ..... Annual Reports of the Aëronautical Society of Great Britain. London.
1866—93. I.CE.*i.*; Oxon.B.; P.O.

A. Gén. Civ...... Annales du Génie Civil; Recueil de Mémoires sur les Mathématiques pures et appliquées; l'Astronomie, la Chimie, la Physique, etc. Paris.
1862—80. B.M.; Camb.U.; Dub.R.C.S.*i.*; I.CE.*i.*; P.O.

A. Gén. Sc. Ps. ..... Annales générales des Sciences Physiques. Bruxelles.
1819—21. Camb.U.; Glasg.U.; N.H.M.; R.S.

Ag. S. J. ..... Journal of the Royal Agricultural Society of England. London.
1840— B.M.; Camb.U.; Chem.S.; Dub.T.C.; Geol.M.; Geol.S.; Glasg.U.*i.*; I.CE.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.Geogr.S.; R.S.; S.K.; U.C.L.*i.*
See **J. Ag. S.**

A. Hydrog. ..... Annales Hydrographiques. Recueil d'avis, instructions, documents, et mémoires relatifs à l'Hydrographie et à la Navigation. Paris.
1849— B.M.; Ebinb.R.S.*i.*; Oxon.B.; R.A.S.*i.*; R.Geogr.S.; R.S.*i.*

Alb. I. T. ..... Transactions of the Albany Institute. Albany.
1830— B.M.; N.H.M.; R.S.; S.K.*i.*

A. Lndw. ..... Annalen der Landwirthschaft in den K. Preuss. Staaten; herausg. vom Präsidium des K. Landes Oecon. Collegiums. Berlin.
1843—71. P.O.

Am. Ac. Mm. ..... Memoirs of the American Academy of Arts and Sciences. Cambridge and Boston.

1785— B.M.*i.*; Camb.P.S.; Camb.U.; Dub.R.D.S.*i.*; Dub.R.I.A.*i.*; Dub.T.C.*i.*; Edinb.R.S.; Geol.S.*i.*; I.CE.*i.*; Linn.S.; N.H.M.; Oxon.R.; P.O.*i.*; R.A.S.; R.Geogr.S.*i.*; R.S.; S.K.*i.*; U.C.L.*i.*

See **Bost. Am. Ac. Mm.** *and* **Bost. Mm. Am. Ac.**

Am. Ac. P. ..... Proceedings of the American Academy of Arts and Sciences. Boston.

1846— B.M.; Camb.P.S.; Camb.U.; Chem.S.*i.*; Dub.R.D.S.; Edinb.R.S.; Geol.S.; Glasg.P.S.; Glasg.U.*i.*; I.CE.*i.*; Linn.S.; Math.S.*i.*; N.H.M.; Oxon.R.; P.O.; R.A.S.; R.Geogr.S.; R.S.; S.K.; U.C.L.*i.*

Am. As. P. ..... Proceedings of the American Association for the Advancement of Science. Washington, Salem.

1848— B.M.*i.*; Camb.P.S.; Camb.U.; Dub.R.I.A.; Edinb.R.S.*i.*; Glasg.P.S.*i.*; Glasg.U.*i.*; I.CE.*i.*; Linn.S.*i.*; N.H.M.; Oxon.B.; Oxon.R.*i.*; P.O.; R.A.S.*i.*; R.Geogr.S.*i.*; R.S.; S.K.

Am. C. ..... The American Chemist, a monthly Journal of theoretical Chemistry. New York.

1871—77. Chem.S.*i.*; N.H.M.; P.O.; Pharm.S.*i.*; S.K.*i.*

Am. C. J. ..... American Chemical Journal. Baltimore.

1879— Camb.P.S.; Camb.U.; Chem.S.; Dub.R.I.A.; Edinb.R.S.; Glasg.P.S.; N.H.M.; Oxon.R.; Pharm.S.*i.*; P.O.; R.S.; S.K.

Am. C. S. J. ..... The Journal of the American Chemical Society. New York, Easton, Pa.

1879— B.M.; Camb.P.S.; Chem.S.; Glasg.U.*i.*; N.H.M.; Pharm.S.; P.O.; S.K.; U.C.L.*i.*

Am. Eng. & Railroad J. American Engineer and Railroad Journal. New York.

1893— *Continuation of:* The Railroad and Engineering Journal, 1887—92. B.M.; I.CE.; P.O.

Amiens Ac. Mm. .....
Amiens Mm. .....
Amiens Mm. Ac. .....
Amiens Mm. Ac. Sc. ... } Mémoires de l'Académie des Sciences, Agriculture, Commerce, Belles-lettres, et Arts du département de la Somme. Amiens.

1835— B.M.; Camb.U.; Dub.T.C.*i.*; N.H.M.*i.*; Oxon.B.*i.*; R.S.*i.*

Am. I. Mn. E. T. ..... Transactions of the American Institute of Mining Engineers. Philadelphia, Easton, New York.

1871— Geol.S.; I.CE.; P.O.; S.K.

A. Mines ..... Annales des Mines, ou Recueil des Mémoires sur l'exploitation des Mines, et sur les Sciences et les Arts qui s'y rapportent. Paris.

1817— B.M.; Camb.U.; Chem.S.*i.*; Dub.R.I.A.; Edinb.R.S.; Edinb.U.*i.*; Geol.S.; Glasg.P.S.*i.*; Glasg.U.*i.*; I.CE.; N.H.M.; Oxon.B.(R.); P.O.; R.S.; S.K.

Am. J. Mth. ..... American Journal of Mathematics. Baltimore.

1878— B.M.; Camb.P.S.; Camb.U.; Dub.N.L.I.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.U.*i.*; I.CE.*i.*; Math.S.; Oxon.B.; Oxon.R.; R.A.S.; R.S.; S.K.; U.C.L.

Am. J. Phm. ..... American Journal of Pharmacy; published by the Philadelphia College of Pharmacy. Philadelphia.

1836— Chem.S.*i.*; Pharm.S.; P.O.*i.*

Am. J. Psychol. ..... The American Journal of Psychology. Baltimore, Worcester, Mass.

1888— B.M.; Oxon.B.; Oxon.R.; U.C.L.*i.*

Am. J. Sc. ..... The American Journal of Science and Arts; Silliman. New Haven.

1818— B.M.; Camb.P.S.*i.*; Camb.U.; Chem.S.*i.*; Dub.N.L.I.*i.*; Dub.R.C.S.*i.*; Dub.T.C.*i.*; Edinb.R.S.; Edinb.U.; Geol.M.; Geol.S.; Glasg.P.S.; Glasg.U.*i.*; I.CE.*i.*; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.*i.*; R.Geogr.S.*i.*; R.S.; S.K.

See **Silliman J.**

Am. Mcr. J. ..... The American Monthly Microscopical Journal. New York.

1880— Camb.U.; Dub.N.L.I.; N.H.M.; Oxon.R.; Pharm.S.*i.*; P.O.

Am. Mcr. S. P. ..... Proceedings of the American Microscopical Society. Washington, Ithaca, N.Y.

1892—94. *Continuation of:* Proceedings of the American Society of Microscopists, 1878—91. *Continued as:* Transactions of the American Microscopical Society, 1895—. N.H.M.

Am. Mcr. S. T. ... . Transactions of the American Microscopical Society. Lincoln, Buffalo.

1895— *Continuation of:* Proceedings, etc., 1892—94. Glasg.U.*i.*; N.H.M.; Oxon.B.

Am. Md. Ph. Reg. ..... The American Medical and Philosophical Register or Annals of Medicine, Natural History, Agriculture and the Arts. New York.

1810—1814. B.M.; Geol.S.; R.S.; U.C.L.

Am. Met. J. ..... American Meteorological Journal. Detroit.
1884—96. B.M.*i.*

Am. Ntlist. ..... The American Naturalist. An illustrated magazine of Natural History. Philadelphia, Boston.
1868— B.M.; Camb.P.S.*i.*; Camb.U.; Edinb.R.S.*i.*; Geol.M.*i.*; Linn.S.*i.*; N.H.M.; Oxon.R.; R.Geogr.S.*i.*; R.S.*i.*; S.K.

Am. Phm. As. P. ..... Proceedings of the American Pharmaceutical Association. Philadelphia.
1853— Pharm.S.

Am. Ph. S. P. ..... Proceedings of the American Philosophical Society. Philadelphia.
1840— Camb.P.S.; Camb.U.*i.*; Chem.S.*i.*; Dub.R.I.A.; Edinb. R.S.; Geol.S.; Glasg.P.S.*i.*; Glasg.U.*i.*; I.CE.*i.*; Linn.S.; Math.S.*i.*; N.H.M.*i.*; Oxon.B.; Oxon.R.*i.*; P.O.; R.A.S.; R.Geogr.S.; R.S.; S.K.; U.C.L.

Am. Ph. S. T. ..... Transactions of the American Philosophical Society. Philadelphia.
1771— B.M.*i.*; Camb.P.S.; Camb.U.*i.*; Chem.S.*i.*; Dub.R.I.A.; Edinb.R.S.; Geol.S.*i.*; Glasg.U.*i.*; I.CE.*i.*; Linn.S.; N.H.M.*i.*; Oxon.B.; Oxon.R.*i.*; P.O.; R.A.S.*i.*; R.Geogr.S.*i.*; R.S.; S.K.*i.*; U.C.L.*i.*
See **Philad. T.**

Am. Pol. J. ..... The American Polytechnic Journal. Washington.
1853—54. B.M.; P.O.

Am. S. CE. T. ..... Transactions of the American Society of Civil Engineers. New York.
1871— I.CE.; P.O.; S.K.*i.*

Am. S. Mcr. P. ..... Proceedings of the American Society of Microscopists. Indianapolis, etc.
1878—91. *Continued as:* Proceedings of the American Microscopical Society, 1892—94. N.H.M.

Amst. Ak. Jb. ..... Jaarboek van de Koninklijke Akademie van Wetenschappen gevestigd te Amsterdam. Amsterdam.
1857— B.M.; Camb.P.S.; Dub.R.D.S.; Dub.T.C.; Edinb.R.S.*i.*; Glasg.P.S.*i.*; Glasg.U.*i.*; Linn.S.; N.H.M.; R.A.S.*i.*; R.Geogr.S.; R.S.; U.C.L.*i.*
See **Amst. Jb.** *and* **Amst. Jb. Ak.**

Amst. Ak. P. ..... Koninklijke Akademie van Wetenschappen te Amsterdam. Proceedings of the Section of Sciences. Amsterdam.
1899— Camb.P.S.; Camb.U.; Chem.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Glasg.P.S.; Glasg.U.; Oxon.B.; R.A.S.; R.Geogr.S.; R.S.; S.K.

Amst. Ak. Vh. ..... Verhandelingen der Koninklijke Akademie van Wetenschappen. Amsterdam.
1854— Camb.P.S.; Camb.U.; Dub.N.L.I.; Dub.R.I.A.*i.*; Edinb. R.S.; Glasg.P.S.*i.*; Glasg.U.*i.*; Linn.S.; N.H.M.; Oxon.B.; R.A.S.; R.Geogr.S.; R.S.; S.K.*i.*; U.C.L.*i.*

Amst. Ak. Vs. ..... Verslagen der Zittingen van de Wis- en Natuurkundige Afdeeling der Koninklijke Akademie van Wetenschappen. 1893, 1894.
Verslagen van de Zittingen der Wis- en Natuurkundige Afdeeling van de Koninklijke Akademie van Wetenschappen. 1895, 1896.
Koninklijke Akademie van Wetenschappen te Amsterdam. Verslagen van de Gewone Vergaderingen der Wis- en Natuurkundige Afdeeling. Amsterdam.
1897— B.M.; Camb.P.S.; Camb.U.; Dub.T.C.; Edinb.R.S.; Glasg.P.S.; Glasg.U.; N.H.M.; R.A.S.; R.Geogr.S.; R.S.; S.K.*i.*

Amst. Ak. Vs. M. ..... Verslagen en Mededeelingen der Koninklijke Akademie van Wetenschappen. Afdeeling Natuurkunde. Amsterdam.
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